

enables formation of an image having excellent image quality.

The copolymer in the invention will be explained below.

The copolymer in the invention is comprised of a combination of a high Tg monomer, a low Tg monomer and a hydrophilic monomer. Regarding a typical composition ratio of each monomer in the copolymer in the invention, it is preferable that a ratio of the high Tg monomer and the low Tg monomer (high Tg monomer: low Tg monomer) is in the range of 50:50 to 95:5. In addition, a ratio of the hydrophilic monomer relative to each monomer is preferably 0.5 to 10% by mass, and more preferably 1 to 5% by mass. When the composition ratio of each monomer in the copolymer in the invention is in the aforementioned preferable range, the effect of the invention becomes more remarkable.

Specific examples of the high Tg monomer include methyl
methacrylate, ethyl methacrylate, isopropyl methacrylate,
vinylpyrrolidone, vinylformal, vinylcarbazole,
cyclohexylethylene, vinyl chloride, acrylonitrile,
vinylacetal, hexafluoropropylene, methylchloroacrylic acid,
ethylchloroacrylic acid and vinylisobutyral.

Examples of the low Tg monomer include butyl acrylate,
butyl methacrylate, dodecyl methacrylate, glycidyl
methacrylate, octadecyl methacrylate, octyl methacrylate,
pentyl methacrylate, propyl methacrylate, tetradecyl
methacrylate, vinyl methyl ether, vinyl ethyl ether, vinyl

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butyl ether, vinyl isobutyl ether, vinylbutyral, vinyl acetate,
and butylchloroacrylic acid.

Examples of the hydrophilic monomer include monomers
having a nitrogen-containing polar group such as an amido group,
an amino group and the like, and vinylcarboxylic acids such as
methacrylic acid, acrylic acid, cinnamic acid and carboxyethyl
acrylate.

Examples of a typical combination of each monomer in the
copolymer in the invention include a combination of methyl
methacrylate as the high Tg monomer, butyl acrylate as the low
Tg monomer and acrylic acid as the hydrophilic monomer, a
combination of ethyl methacrylate as the high Tg monomer, butyl
methacrylate as the low Tg monomer and carboxyethyl acrylate
as the hydrophilic monomer, a combination of vinylisobutyral
as the high Tg monomer, octyl methacrylate as the low Tg monomer
and methacrylic acid as the hydrophilic monomer, and the like.

In the copolymer in the invention, it is preferable that
at least one of the high Tg monomer and the low Tg monomer is
a methacrylic ester or an acrylic ester.

The aforementioned toner of the invention may be prepared
by any process, and is preferably prepared via at least an
aggregating step of aggregating particles comprising fine
particles of a binder resin (hereinafter, referred to as "binder
resin fine particles" in some cases) having a copolymer
comprised of a combination of the high Tg monomer, a low Tg